

Contribution to the study of the ground-beetle fauna (Coleoptera: Carabidae) of the Osogovo Mountain, Bulgaria. III.

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Introduction

In the first part of the present study the author adds 77 more species and subspecies which are new for the carabid fauna of the Osogovo Mt, as well as data about their vertical range, season activity and life conditions of the adults. All specimens have been collected from the Bulgarian part of the mountain. The second half of the paper concerns the erroneous identifications made in all the previous papers on this subject, and the determination of the subspecies status of the ground-beetles from the region.

Material and methods

The bulk of the specimens were collected by the author during the period of April - November 1994, April - October 1995, April - October 1996, October 1997 and June - July 1998. Single specimens collected by other colleagues before 1994 have been enlisted too. The collection methods are the same as indicated by GUÉORGUIEV (1996). The material is preserved in the National Museum of Natural History, Sofia (NMNH). The habitats visited by the author are:

H 1. Hisarluka Park, 640-670 m, below Bogoslov Village. Secondary coniferous plantations (*Pinus nigra* predominating, as well as *P. silvestris* and *Corylus avellana*).

H 2. East slope above Bogoslov Village, 900 m. Meadows.

H 3. North slope above the road Bogoslov Village - Trite Bouki Chalet, 940-960 m. Beech forest.

H 4. Popovi Livadi, 1230-1260 m. Beech forest.

H 5. Popovi Livadi, 1230-1260 m. Meadows used for pastures.

- H 6.** Igluka Chalet, 1320-1340 m. Spruce forest.
- H 7.** Igluka Chalet, 1330-1350 m. Beech forest.
- H 8.** Igluka Chalet, 1340-1350 m. Meadows. Moist habitat around brook.
- H 9.** Trite Bouki Chalet and Bor Chalet, 1540-1570 m. Beech forest.
- H 10.** Trite Bouki Chalet, 1540-1570 m. Coniferous forest (*Pinus silvestris*).
- H 11.** Trite Bouki Chalet, 1550-1650 m. Secondary grass vegetation in the place of former beech and coniferous forests.
- H 12.** The section of Trite Bouki Chalet - Begbunar Spring, 1600-1830 m. Grass vegetation. Moist habitats.
- H 13.** Begbunar Spring, 1820-1840 m. Hygrophilous grass vegetation.
- H 14.** The section of Begbunar Spring - the south foot of Tsumni Kamak Peak, 1830-2000 m. The orophytic belt above Gurlyano Village is also included there, 1800-2000 m. Grass vegetation.
- H 15.** The section of the south foot of Tsumni Kamak Peak - Ruen Peak, 2000-2251 m. The orophytic belt above Gurlyano Village is also included there, 2000-2251 m. Grass vegetation.
- H 16.** Riverside places before and after Stradalovo Village, 700-720 m. Stony and muddy habitats.
- H 17.** Xerophytic terrain between Pelatikovo Village and Stradalovo Village, 800 m. Secondary coniferous forest.
- H 18.** The Eleshnitsa Valley between Stradalovo Village and Rakovo Village, 800-850 m. Hygrophilous riverside vegetation on calcareous terrain.
- H 19.** Brook between Rakovo Village and Vetren Village, 850 m. Xerophytic vegetation on silicate terrain.
- H 20.** Chekanetski bridge over the Eleshnitsa River, 950 m. Xerophytic grass. Deciduous wood riverside vegetation.
- H 21.** The Eleshnitsa Valley between Chekanetski bridge and Sazhdenik Village, 1000-1050 m. Grass and deciduous wood riverside vegetation.
- H 22.** Hygrophilous to hydrophilous stony place near the Eleshnitsa Valley, 1300 m. Around a beech forest.
- H 23.** North slope, south of the Eleshnitsa Valley, 1350 m. Beech forest.
- H 24.** The Eleshnitsa Valley, 1350 m. Riverside meadow.
- H 25.** Mechata Douпка Cave near Stradalovo Village, 850 m. Xerophytic oak forest on calcareous terrain.
- H 26.** Along the Novoselska River between Slokoshtitsa Village and Novo Selo Village, 720 m. Slimy rush habitat.
- H 27.** The place of Dve Reki along the Novoselska River, 1000 m. Various habitats: riverside vegetation (*Populus alba* and *Alnus* spp.); potato fields; coniferous forest.
- H 28.** Big torrent near the road Trite Bouki Chalet - Novo Selo Village, 1300-1350 m. Mixed coniferous and mesophilous deciduous forest.
- H 29.** Hygrophilous to hydrophilous riverside place at the Mlachka Reka River near Chervena Yabulka Village, 1440-1460 m. Mixed forest.

List of the species and subspecies

Omophron (Omophron) limbatus (F.). H 16 (2-3.VII.1998, 2 specimens); H 20 (5.VI.1998, 4 specimens); H 26 (2.VII.1998, 2 specimens).

Leistus (Pogonophorus) magnicollis magnicollis Motsch. H 9 (2.IX.1994, 1 ♀, in beach foliage; 7.VI.1995, 1 ♂, in beech foliage). Balkan endemic species and subspecies.

Leistus (Leistus) ferrugineus (L.). H 5 (traps: V.1996, 1 specimen; IX-X.1996, 1 specimen); H 8 (3.VI.1998, 1 ♀); H 9 (traps: IX-X.1995, 1 ♂).

Nebria (Nebria) brevicollis (F.). H 19 (traps: V.1996, 1 ♂).

Notiophilus (Notiophilus) germinyi Fauv. H 14 (Choveka Peak, 2000 m, 31.VII.1980, 2 specimens, leg. J. Ganev).

Calosoma (Calosoma) sycophanta (L.). H 21 (2.VII.1998, remains of elytrae).

Elaphrus (Neolaphrus) uliginosus F. H 26 (2.VII.1998, 1 ♀).

Elaphrus (Elaphroterus) aureus aureus P. Mull. H 16 (2-3.VII.1998, 1 ♂, 1 ♀); H 21 (5.VI.1998, 2 ♀♀; 2.VII.1998, 1 ♂).

Loricera (Loricera) pilicornis pilicornis (F.). H 27 (5.VI.1998, 2 ♂♂).

Dyschiriodes (Dyschiriodes) politus politus Dej. H 26 (2.VII.1998, 1 specimen).

Broscus cephalotes (L.). H 16 (2-3.VII.1998, 2 ♂♂).

Perileptus (Perileptus) areolatus areolatus (Creutzer). H 16 (2-3.VII.1998, 8 specimens).

Trechus (Trechus) quadristriatus (Schrk.). H 3 (7.VI.1995, 1 specimen); H 9 (2-3.IX.1996, 2 specimens, in beech foliage); H 16 (2-3.VII.1998, 1 specimen).

Trechus (Trechus) austriacus Dej. H 25 (traps: IX.1994-II.1995, 1 specimen).

Trechus (Trechus) subnotatus subnotatus Dej. H 9 (2.IX.1994, 1 specimen, in beech foliage near a brook; 2.X.1995, 5 specimens, near a brook; 7.VI.1996, near a brook, 2 specimens; 2-3.IX.1996, 1 specimen, in beech foliage); H 11 (3.VI.1998, 1 specimen); H 21 (5.VI.1998, 1 specimen); H 22 (traps: VI-VII.1996, 1 specimen).

Tachys (Paratachys) bistriatus (Duft.). H 16 (2-3.VII.1998, 2 specimens).

Elaphropus (Tachyura) quadrisignatus (Duft.). H 14 (Tsumni Kamak Peak, 2000 m, 5.VII.1995, 3 specimens); H 21 (9-10.VI.1995, 2 specimens).

Elaphropus (Tachyura) diabrachys (Kol.). H 16 (2-3.VII.1998, 8 specimens); H 21 (2.VII.1998, 2 specimens); H 27 (9.VI.1995, 1 specimen; 5.VI.1998, 1 specimen).

Tachyta nana nana (Gyllh.). H 11 (3.VI.1998, 2 specimens under the bark of a beech log).

Bembidion (Metallina) lampros (Hbst.). in large numbers in: H 3 (27.IV.1994); H 4 (10.VII.1994); H 8 (25.IV.1995); H 9 (2.X.1995); H 11 (3.VI.1998);

H 12 (4.VI.1994; 8.VI.1995; 4.VI.1998); H 13 (4.VI.1994; 8.VI.1995; 4.VI.1998); H 15 (Shapka Peak, 2150 m, 8.VI.1995, snow spots); H 18 (11.V.1996); H 21 (9-10.VI.1995; 5.VI.1998; 2.VII.1998); H 28 (5.IV.1994); H 29 (2.IX.1994; 5.VIII.1996).

***Bembidion (Metallina) properans* Steph.** H 5 (traps: V.1994, 2 ♂♂, 2 ♀♀; V.1996, 2 ♀♀); H 8 (3.VI.1998, 2 specimens); H 12 (8.VI.1995, 4 specimens); H 27 (2.VII.1998, 1 specimen).

***Bembidion (Synechostictus) millerianum* Heyd.** H 14 (Tsumni Kamak Peak, 2000 m, 5.VII.1995, 1 specimen); H 20 (5.VI.1998, 1 specimen); H 21 (27-28.IV.1994, 1 specimen; 9-10.VI.1995, in large numbers; 5.VI.1998, in large numbers); H 27 (5.VI.1998, 1 specimen).

***Bembidion (Nepha) caucasicum* Motsch.** H 12 (4.VI.1994, 2 specimens; 4.VI.1998, 1 specimen); H 13 (4.VI.1994, 7 specimens; 4.IX.1995, 2 specimens); H 14 (Tsumni Kamak Peak, 1950-2000 m, 4.VI.1994, 5 specimens; 16.X.1997, 1 specimen; traps: VII.1994, 3 specimens); H 15 (Shapka Peak, 2000-2100 m, 8.VI.1995, 1 specimen, snow spots).

***Bembidion (Nepha) tetragrammum illigeri* Net.** H 16 (2-3.VII.1998, 1 ♂).

***Bembidion (Bembidionetolitzkya) varicolor varicolor* (F.).** H 16 (2-3.VII.1998, 1 ♂, 2 ♀♀).

***Bembidion (Bembidionetolitzkya) rhodopense* Apf.** H 12 (1.IX.1994, 1 specimen); H 27 (9.VI.1995, 1 specimen, near a brook). Balkan endemic species.

***Bembidion (Bembidionetolitzkya) tibiale* (Duft.).** H 16 (2-3.VII.1998, 1 ♂, 1 ♀); H 21 (5.VI.1998, 1 ♀); H 27 (2.VII.1998, 1 ♀).

***Bembidion (Bembidionetolitzkya) geniculatum geniculatum* Heer.** H 14 (16.X.1996, 1 ♀).

***Bembidion (Peryphanes) deletum deletum* Serv.** H 8 (6.VIII.1996, 1 ♀; 3.VI.1998, 1 ♀); H 12 (4.VI.1994, 2 specimens; 1.IX.1994, 2 specimens; 8.VI.1995, 4 specimens, 22.X.1995, 1 specimen; 4.VI.1998, 2 specimens); H 13 (4.VI.1994, 3 specimens; 8.VI.1995, 1 ♂, 1 ♀; 4.IX.1995, 2 specimens); H 14 (Tsumni Kamak Peak, 2000 m, 4.VI.1994, 2 specimens); H 15 (Shapka Peak, 2150 m, 8.VI.1995, 1 specimen, snow spots); H 29 (2.IX.1994, 1 specimen).

***Bembidion (Peryphanes) dalmatinum dalmatinum* Dej.** H 9 (2.IX.1994, 1 specimen); H 26 (2.VII.1998, 1 ♂); H 27 (5.VI.1998, 1 specimen).

***Bembidion (Peryphanes) pindicum* Apfelbeck, 1901.** H 14 (the south foot of Tsumni Kamak Peak, 2000 m, 16.X.1997, 1 ♀, leg. B. Guéorguiev, under stone in the stratum). **New for the Bulgarian fauna.** A Balkan endemic species. According to APFELBECK (1902; 1904) this taxon is distributed in the alpine regions of the following high Balkan mountains: Taygetos Mt (2407 m) in Pelopponesos; Timfristos (= Veluchi) Mt (2315 m), the massifs of Oxia (1926 m) and Korax (2350 m) - both parts of Vardousia Mt, Parnassos Mt (2457 m) - all situated in Central Greece; Peristeri (2295 m) - a massif of Pindos Mts in north-western Greece; further north on the Vran Mt (2074 m) in south Bosnia. Probably a more peculiar form, something intermediate between *B. pindicum* and *B. asi-*

aeminoris Net., inhabits the Korabi Mt (2764 m) at the Albanian-Macedonian border (NETOLITZKY, 1943). Its occurrence on Osogovo Mt (2251 m), on the east of the Vardar zoogeographical barrier, is quite interesting.

***Bembidion (Peryphanes) stephensi stephensi* Crotch.** H 29 (5.VIII.1996, 1 ♀).

***Bembidion (Peryphanes) grandipenne grandipenne* Schaum.** H 26 (2.VII.1998, 1 ♀).

***Bembidion (Peryphus) femoratum femoratum* Sturm.** H 16 (2-3.VII.1998, 1 ♂); H 26 (2.VII.1998, 1 ♀).

***Bembidion (Peryphus) subcostatum javurkovae* Fass.** in large numbers in: H 11 (3.VI.1998); H 16 (2-3.VII.1998); H 20 (27-28.IV.1994; 5.VI.1998; traps: V.1994); H 21 (9-10.VI.1995; 5.VI.1998); H 27 (9.VI.1995; 5.VI.1998); H 28 (5.IV.1994; 9.VI.1995); H 29 (2.IX.1994).

***Bembidion (Ocydromus) decorum decorum* (Zenker).** H 16 (2-3.VII.1998, 1 ♂, 2 ♀♀).

***Pterostichus (Phonias) strenuus* (Panz.).** H 20 (traps: V.1996, 1 ♀).

***Pterostichus (Argutor) vernalis* (Panz.).** H 8 (traps: VI-VII.1996, 1 ♀).

***Pterostichus (Haptoderus) brevis brevis* (Duft.).** H 6 (traps: IX-X.1995, 1 ♂; IX-X.1996, 1 ♀); H 7 (traps: V.1996, 1 ♂, 1 ♀; VI-VII.1996, 1 ♂); H 9 (traps: VI-VII.1996, 2 ♀♀; VI-VII.1996, 1 ♂); H 10 (traps: V.1996, 1 ♀; VIII.1996, 1 ♀); H 22 (traps: VI-VII.1996, 1 ♂, 1 ♀; VIII.1996, 1 ♀). So far known in Bulgaria only from Belasitsa Mt (GUÉORGUIEV, 1992).

***Pterostichus (Haptoderus) vecors* Tschitsch.** H 18 (traps: V.1996 2 ♂♂); H 22 (5.V.1996, 1 ♂, 1 ♀; traps: VI-VII.1996, 1 ♂). A Bulgarian endemic species.

***Pterostichus (Morphnosoma) melanarius bulgaricus* Lutsh.** H 27 (5.VI.1998, 1 ♂).

***Pterostichus (Pterostichus) brucki* Schaum.** in large numbers in: H 2 (5.VIII.1996); H 6 (traps: VI-VII.1996; VIII.1996); H 7 (traps: V.1996; VI-VII.1996); H 9 (traps: V.1996; VI-VII.1996; VIII.1996); H 18 (traps: V.1996; VI-VII.1996; VIII.1996); H 22 (traps: V.1996; VI-VII.1996; VIII.1996); H 23 (traps: VI-VII.1996; VIII.1996); H 24 (5.V.1996; traps: VI-VII.1996; VIII.1996); H 27 (6.VIII.1996); H 29 (5.VIII.1996).

***Olistopus sturmi* (Duft.).** H 5 (traps: IV.1994, 1 specimen).

***Agonum (Agonum) duftschmidi* Schmidt.** M 14.(8.VI.1995, 2 ♀♀).

***Agonum (Agonum) muelleri* (Hbst.).** H 26 (2.VII.1998, 1 ♂).

***Agonum (Agonum) viridicupreum viridicupreum* (Goeze).** M 8 (3.VI.1998, 1 ♀).

***Synuchus (Synuchus) vivalis vivalis* (Ill.).** H 3 (traps: VI-VII.1996, 1 ♂); H 20 (traps: VI-VII.1996, 1 ♂, 1 ♀); H 21 (9-10.VI.1995, 1 ♂).

***Amara (Amara) littorea* Thoms.** H 7 (traps: V.1996, 1 ♀); H 9 (4.V.1996, 1 ♂); H 24 (traps: V.1996, 1 ♂).

***Amara (Amara) proxima* Putz.** H 11 (8.VI.1995, 1 specimen).

- Amara (Amara) anthobia* Villa. H 18 (traps: V.1996, 1 ♂).
- Amara (Amara) lucida* (Duft.). H 18 (11.V.1996, 1 ♂).
- Amara (Celia) ingenua* (Duft.). H 12 (22.X.1995, 4 specimens).
- Amara (Bradytus) fulva* (O. F. Muller). H 27 (2.VII.1998, 1 ♀).
- Curtonotus (Curtonotus) aulicus* (Panz.). H 18 (traps: VI- VII.1996, 1 ♀); H 24 (traps: VIII.1996, 2 ♂♂, 2 ♀♀).
- Anisodactylus (Anisodactylus) binotatus* (F.). H 26 (2.VII.1998, 1 ♂).
- Stenolophus (Stenolophus) teutonius* (Schrk.). H 26 (2.VII.1998, 4 ♀♀); H 27 (5.VI.1998, 1 ♂, 1 ♀; 2.VII.1998, 2 ♀♀).
- Acupalpus (Acupalpus) flavicollis* (Sturm). H 26 (2.VII.1998, 2 specimens); H 27 (5.VI.1998, 7 specimens; 2.VII.1998, 1 specimen).
- Harpalus (Pseudophonus) griseus* (Panz.). H 27 (5.VI.1998, 1 ♂).
- Harpalus (Harpalus) honestus* (Duft.). H 21 (9-10.VI.1995, 1 ♂).
- Harpalus (Harpalus) sulphuripes sulphuripes* Germ. H 2 (10.V.1996, 1 ♂, 2 ♀♀); H 8 (traps: V.1996, 1 ♀).
- Harpalus (Harpalus) attenuatus* Steph. H 2 (traps: V.1996, 1 ♂); H 5 (traps: IX-X.1995, 1 ♀); H 19 (traps: VI-VII.1996, 1 ♀).
- Harpalus (Harpalus) triseriatus triseriatus* Fleisch. H 17 (10.VI.1995, 1 ♂).
- Harpalus (Harpalus) tardus* (Panz.). H 1 (traps: V.1996, 1 ♂, 1 ♀); H 18 (traps: V.1996, 9 ♂♂, 2 ♀♀; VI-VII.1996, 5 ♂♂, 8 ♀♀).
- Harpalus (Harpalus) latus* (L.). H 8 (traps: V.1996, 1 ♂, 1 ♀; 3.VI.1998, 1 ♂); H 27 (5.VI.1998, 1 ♂).
- Harpalus (Harpalus) smaragdinus* (Duft.). H 5 (traps: VI-VII.1996, 1 ♂; VIII.1996, 1 ♀); H 14 (below Shapka Peak, 2000 m, 8.VI.1995, 1 ♂, 1 ♀); H 19 (traps: VI-VII.1996, 1 ♀); H 26 (2.VII.1998, 1 ♀).
- Ophonus (Metophonus) puncticeps* Steph. H 18 (traps: VIII.1996, 1 ♀); H 22 (traps: VI-VII.1996, 1 ♀).
- Ophonus (Metophonus) schaubergerianus* Puel. H 18 (traps: V.1996, 1 ♀); H 20 (traps: V.1996, 2 ♂♂, 1 ♀); H 21 (2.VII.1998, 1 ♀); H 24 (traps: VIII.1996, 1 ♂).
- Ophonus (Hesperophonus) azureus* (F.). H 5 (traps: V.1996, 1 ♂); H 8 (25.IV.1995, 1 ♀); H 16 (2-3.VII.1998, 1 ♂).
- Ophonus (Ophonus) sabulicola ponticus* Schaub. H 5 (traps: IX-X.1995, 1 ♂).
- Panagaeus (Panagaeus) bipustulatus* (F.). H 20 (traps: V.1995, 1 ♂); H 21 (9-10.VI.1995, 1 ♂).
- Chlaenius (Chlaeniellus) nitidulus* (Schrk.). H 16 (2-3.VII.1998, 1 ♂, 1 ♀); H 21 (9-10.VI.1995, 1 ♂; 5.VI.1998, 1 ♀); H 26 (2.VII.1998, 2 ♀♀); H 27 (5.VI.1998, 1 ♂, 1 ♀; 2.VII.1998, 1 ♀).
- Chlaenius (Chlaeniellus) vestitus* (Payk.). H 8 (6.VIII.1996, 1 ♀).
- Syntomus pallipes* (Dej.). H 2 (10.V.96, 1 specimen); H 8 (23.X.1995, 1 spec-

imen); H 20 (5.VI.1994, 2 specimens; 5.V.1996, 1 specimen); H 21 (28.IV.1994, 1 specimen; 9-10.VI.1995, 1 specimen); H 27 (9.VI.1995, 1 specimen).

Syntomus truncatellus truncatellus (L.). H 8 (25.IV.1995, 1 specimen); H 12 (8.VI.1995, 2 specimens); H 14 (16.X.1997, 1 specimen); H 26 (2.VII.1998, 1 specimen).

Microlestes fissuralis Rtt. H 8 (25.IV.1995, 1 specimen).

Lionychus quadrillum (Duft.). H 16 (2-3.VII.1998, 3 ♂♂, 4 ♀♀); H 27 (5.VI.1998, 1 ♂).

Cymindis (Cymindis) lineata (Quens.). H 5 (traps: VI.1995, 1 ♂).

Another ground-beetle - *Harpalus (Harpalus) serripes serripes* (Quens.), found in the Macedonian part of the Osogovo Mt (GUÉORGUIEV, 1996) has been also established in the Bulgarian one - H 5 (traps: VI.1995, 1 ♂); H 18 (11.V.1996, 1 ♂, 1 ♀); H 21 (27.IV.1995, 1 ♂; 9-10.VI.1995, 1 ♂; 5.VI.1998, 1 ♂); H 26 (2.VII.1998, 1 ♀).

Critical notes on published taxa of ground-beetles from Osogovo Mt

Some taxa published by BURESCH & KANTARDJIEVA (1928), DRENSKY (1928), KANTARDJIEVA (1928), PAWLOWSKI (1973), HIEKE & WRASE (1988), and GUÉORGUIEV (1996) have either been determined wrongly or the subspecific status of the local populations has not been specified correctly. After a revision, done by Dr Hieke, Mr. Wrase and the present author, their correct identification is indicated below.

Cicindela (Cicindela) campestris campestris L., det. Guéorguiev (KANTARDJIEVA, 1928, sub *C. c.* var. *palustris* Motsh.).

Carabus (Carabus) ullrichi fastuosus Pall., det. Guéorguiev (BURESCH & KANTARDJIEVA, 1928, sub *C. (Eucarabus) u. rhilensis* Kr.).

Carabus (Tomocarabus) convexus dilatatus Dej., det. Guéorguiev (GUÉORGUIEV, 1996, sub *C. (Morphocarabus) scabriusculus bulgarus* Lap.). This taxon has been cited from Osogovo Mt (BURESCH & KANTARDJIEVA, 1928).

Carabus (Archicarabus) montivagus montivagus Pall., det. Guéorguiev (BURESCH & KANTARDJIEVA, 1928, sub *C. (DeuteroCarabus) m.* Pall.; GUÉORGUIEV, 1996, sub *C. (A.) m. bulgaricus* Csiki).

Carabus (Pachystus) cavernosus cavernosus Friv., det. Guéorguiev (BURESCH & KANTARDJIEVA, 1928, sub *C. (P.) c.* Friv.; DRENSKY, 1928, sub *C. c.* Friv.; HIEKE & WRASE, 1988, sub *C. (P.) c.* Friv.).

Carabus (Chaetocarabus) intricatus intricatus L., det. Guéorguiev (BURESCH & KANTARDJIEVA, 1928, sub *C. (Ch.) i. starensis* Born.).

Clivina collaris collaris (Hbst.), det. Wrase (GUÉORGUIEV, 1996, sub *C. fossor* (L.)). First record for Osogovo Mt.

Trechus priapus medius Meixner, det. Guéorguiev (PAWLOWSKI, 1973, sub

Tr. p. K. Dan.). Sciaky (in litt.) determined the local specimens first as *T. priapus*. Then it was established from the almost unknown paper of MEIXNER (1939) that a separate geographical race of that species - *T. p. medius*, was described which is a subspecies inhabiting the area between Morava River and Iskar River.

Platynus (Platynidius) scrobiculatus serbicus (Csiki), det. Guéorguiev (GUÉORGUIEV, 1996, sub *Agonum (Platynus) s. F.*).

Calathus (Calathus) fuscipes fuscipes (Goeze), det. Guéorguiev (GUÉORGUIEV, 1996, sub *C. (C.) f. (Goeze)*). After the publication of the last paper of the author, it was established that the material published as *C. (C.) f.* consists of the two close taxa - *C. fuscipes fuscipes* and *C. distinguendus* Chd. Using the same habitats (H) given in GUÉORGUIEV (1996), the data pertaining to *C. (C.) distinguendus* are presented below. The remaining information concerns *C. f. fuscipes*.

Calathus (Calathus) distinguendus Chd., det. Guéorguiev. Tash-Tepe Peak, 1996 m, 21.VI.1926, 2 ♂♂, 2 ♀♀; H 1 (traps: V., 1 ♀; VII., 2 ♀♀; VIII., 1 ♂, 2 ♀♀; IX., 1 ♀); H 2 (27.IV., 1 ♂); H 6 (VII.-IX., 2 ♂♂, 2 ♀♀); H 8 (traps: V., 1 ♂; VII., 1 ♀; VIII., 1 ♀; IX., 2 ♀♀); H 9 (25.III., 1 ♀; traps: IV., 1 ♂, 3 ♀♀; VI., 1 ♂; VII., 2 ♂♂, 2 ♀♀; VIII., 2 ♂♂, 3 ♀♀; IX., 15 ♂♂, 31 ♀♀); H 19 (5.VI.1998, 1 ♂). A new taxon for Osogovo Mt.

Amara (Amara) nitida nitida Sturm, det. Guéorguiev (HIEKE & WRASE, 1988, sub *A. (A.) n.* Sturm).

Amara (Amara) lunicollis Schdt., det. Hieke (GUÉORGUIEV, 1996, sub *A. (A.) morio nivium* Tschitsch.). A first record for Osogovo Mt.

Amara (Celia) messae Baliani, det. Hieke (GUÉORGUIEV, 1996, sub *A. (C.) erratica* (Duft.)). A new taxon for Osogovo Mt.

Amara (Bradytus) consularis (Duft.), det Hieke (GUÉORGUIEV, 1996, sub *A. (B.) fulva* (O. F. Muller)). A first record for Osogovo Mt.

Harpalus (Harpalus) pumilus Sturm, det. Wrase (GUÉORGUIEV, 1996, sub *Egadroma marginata* (Dej.)). *H. pumilus* has been found in both the Bulgarian and the Macedonian parts of Osogovo Mt.

The specimens of the following species, collected from the studied area (GUÉORGUIEV, 1996), belong to the nominate subspecies: *Calosoma auropunctatum* (Hbst.), *Carabus hortensis* L., *Poecilus lepidus* (Leske), *Pterostichus niger* (Schall.), *Pterostichus oblongopunctatus* (F.), *Abax carinatus* (Duft.), *Calathus melanocephalus* (L.), *Calathus erratus* Sahlbg., *Amara apricaria* (Payk.), *Amara equestris* (Duft.), *Gynandromorphus etruscus* (Quens.), *Harpalus rufipalpis* Sturm, *Harpalus quadripunctatus* Dej., and *Harpalus serripes* (Quens.).

Conclusions

As a result of the earlier papers of the author (GUÉORGUIEV, 1996; 1997; 1998), as well as the present one (including the above mentioned corrections) the total

amount of the known ground-beetles taxa from the Osogovo Mt has been increased to 162 species and subspecies. So far 161 from them have been established in the Bulgarian part of the area and 25 in the Macedonian (GUÉORGUIEV, 1998). *Bembidion (Peryphanes) pindicum* Apf. is new for the Bulgarian fauna, while *Pterostichus (Haptoderus) brevis brevis* (Duft.) has been found for the second time in this country.

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Принос към изучаването на бръмбарите-бегачи (Coleoptera: Carabidae) от Осоговската планина. III.

Борислав ГЕОРГИЕВ

(Р е з ю м е)

Настоящата трета поредна работа на автора върху Carabidae от Осоговската планина се състои от две части. В първата са включени 77 нови вида и подвиди за планината с данни за вертикалното разпространение, сезонната активност и микроусловията на живот на имагото. *Bembidion (Peryphanes) pindicum* Arf. е нов за българската фауна, а *Pterostichus (Haptoderus) brevis brevis* (Duft.) е намерен за втори път у нас. Материалът е събран от автора от 29 различни находища през периодите IV-XI.1994, IV-X.1995, IV-X.1996, X.1997 и VI-VII.1998. Включени са и единични екземпляри, събирани от други лица преди този период, които бяха намерени в колекциите на Националния природонаучен музей в София. Във втората част от работата са коригирани погрешно определените в предишни публикации таксони и е уточнен подвидовият статус на всички публикувани за района видове и подвидове. В резултат общият брой на известните карабиди от Осогово става 162 (161 от българската и 25 от македонската част на планината).